JS 6/2/21
RJA 2/18/22

Ecotox Report for Case # P-19-0009

General

[redacted]

Report Status: Complete
Status Date: 12/10/2018
CRSS Date:
SAT Date:
SAT Chair:
Consolidated PMN: N
Consolidated Set:
Ecotox Related Cases: [redacted]
Health Related Cases:
Submitter: Allnex USA Inc.
CAS Number: [redacted]
Chemical Name: [redacted]
Use: Corrosion protection additive in resin for cathodic electrodeposition dip coating for metal substrates. Amine FGEW = 777 by charge, 782 by termination. Formaldehyde FGEW = 981 by charge, 1565 by termination. Combined FGEW = 434 by charge, 521 by termination. [redacted]
Trade Name: RESYDROLÂ®
SWE 5862/37 liquid coating resins
PV-max(kg/yr): [redacted]
Ecotox Assessor: Gallagher, Jeffrey

Fate Summary Statement

Fate Summary Statement:
P-19-0009
FATE:
MW = 3129 with 1.2% < 500 and 5.7% < 1000
[redacted]
S =
Disp.
VP < 1.0E-6 torr at 25 °C (E)
BP > 400 °C (E)

H <
1.00E-8 (E)
POTW removal (%) = 90 via sorption
Time for complete
ultimate aerobic biodeg > mo
Sorption to soils/sediments =
v.strong
PBT Potential: P3B1
FATE: Migration to ground water =
negl

Physical Chemical Information

Molecular Weight:	3129.0		
Wt% < 500:	1.2	**Wt% < 1000:**	5.7
Physical State - Neat:	[redacted]		
Melting Point:		**Melting Point (est):**	
MP (EPI):			
Vapor Pressure:		**Vapor Pressure (est):**	<0.000001
VP (EPI):			
Water Solubility:		**Water Solubility (est):**	Disperible
Water Solubility (EPI):			
Henry's Law::			
Log Koc:		**Log Koc (EPI):**	
Log Kow:		**Log Kow (EPI):**	
Log Kow Comment:			

SAT Concern Level

Ecotox Rating (1):	3
Ecotox Rating Comment (1):	
Ecotox Rating (2):	

Ecotox Rating Comment (2):	
Ecotox Route of Exposure:	All releases to water

Ecotox Comments

Exposure Based Review (Eco):	N
Ecotox Comments:	
Exposure Based Testing:	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments

Eco-Toxicity Comment:

Fate Ratings

Removal in WWT/POTW (Overall): Condition	Rating Values	Rating Description 1	2	3	4	Comment
Fish BCF:						
Log Fish BCF:						
WWT/POTW Sorption:		Low	Moderate	Strong	V. Strong	
WWT/POTW Stripping:		Extensive	Moderate	Low	Negligible	
Biodegradation Removal:		Unknown	High	Moderate	Negligible	
Biodegradation Destruction:		Unknown	Complete	Partial	—	
Aerobic Biodeg Ult:		<= Days	Weeks	Months	> Months	
Aerobic Biodeg Prim:		<= Days	Weeks	Months	> Months	
			Weeks	Months	> Months	

Removal in WWT/POTW (Overall): Condition	Rating Values	Rating Description 1	2	3	4	Comment
Anaerobic Biodeg Ult:		<= Days				
Anaerobic Biodeg Prim:		<= Days	Weeks	Months	> Months	
Hydrolysis (t1/2 at pH 7,25C) A:		<= Minutes	Hours	Days	>= Months	
Hydrolysis (t1/2 at pH 7,25C) B:		<= Minutes	Hours	Days	>= Months	
Sorption to Soils/Sediments:		V. Strong	Strong	Moderate	Low	
Migration to Ground Water:		Negligible	Slow	Moderate	Rapid	
Photolysis A, Direct:		Negligible	Slow	Moderate	Rapid	
Photolysis B, Indirect:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox A, OH:		Negligible	Slow	Moderate	Rapid	
Atmospheric Ox B, O3:		Negligible	Slow	Moderate	Rapid	
Bio Comments:						
Fate Comments:						

Ecotoxicity Values

Test organism	Test Type	Test Endpoint	Predicted	Experimental	Comments
Fish	96-h	LC50	2.4		
Daphnid	48-h	LC50	4.9		
Green Algae	96-h	EC50	0.67		
Fish	-	Chronic Value	0.13		
Daphnid	-	Chronic Value	0.35		
Green Algae	-	Chronic Value	0.18		

Ecotox Value Comments: EPA determined environmental hazard for this new chemical substance based on SAR predictions for cationic polymers (special class within ECOSAR v.2.0; 1.8% A-N [using amine FGEW of 777]); MW

Test organism	Test Type	Test Endpoint	Predicted	Experimental	Comments
	3129 with 1.2% <500 and 5.7% <1000; [redacted] with an unknown MP (P); S = dispersible (P); effective concentrations based on 100% active ingredients and nominal concentrations; hardness <150 mg/L as CaCO3; and TOC <2.0 mg/L; Mitigation of toxicity expected in the presence of 10 mg TOC/L, i.e., 22x humic acid mitigation due to 1.8% A-N.				

Ecotox Factors

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
Acute Aquatic (ppb):	670	4	168	Algal EC50
Chronic Aquatic(ppb):	130	10	13	Fish chronic value

Factors	Values	Comments
SARs:	Polycationic Polymers	
SAR Class:	Polymers-cationic-dispersible-1.8% A-N	
TSCA NCC Category?	Polycationic Polymers	

Recommended Testing:

Ecotox Factors Comments: Environmental Hazard: Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risk because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA determined environmental hazard for this new chemical substance based on SAR predictions for cationic polymers (special class within ECOSAR v.2.0; 1.8% A-N [using amine FGEW of 777])). Acute toxicity values estimated for fish, aquatic invertebrates and algae are 2.4 mg/L, 4.9 mg/L, and 0.67 mg/L, respectively. Chronic toxicity values estimated for fish, aquatic invertebrates, and algae are 0.13 mg/L, 0.35 mg/L, and 0.18 mg/L for fish, aquatic invertebrates, and algae, respectively. These toxicity values indicate that the new chemical substance is expected to have high environmental hazard. Application of assessment factors of 4 and 10 to

acute and chronic toxicity values, respectively, results in acute and chronic concentrations of concern of 0.168mg/L (168 ppb) and 0.013 mg/L (13 ppb), respectively.

Environmental Risk: Risks to the environment were evaluated by comparing estimated surface water concentrations with the acute and chronic concentrations of concern. Acute risks to the environment were not identified due to releases to water that did not exceed the acute COC. Chronic risks to the environment were identified for this PMN based on the chronic COC of 13 ppb being exceeded for [redacted] (surface water concentration [SWC]: 38.7 ppb) during processing and being exceeded for [redacted] (SWC: 148 ppb) during use.

Comments/Telephone Log

Artifact	Update/Upload Time